Display

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1 General

In case of repair, replace the complete display.

The display comes from different manufacturers. To ensure installation compatibility of the display, the mounting frame has several boreholes.

1.1 Checking the display

Check the display using the “external service mode with personal computer”.

1.2 Replacing the display

1 Switch off the device.

2 Unplug the power plug of the device from the socket-outlet.

3 Disconnect the compressed-gas supply hoses from the central gas supply.

Electrostatic discharge may damage electrostatic sensitive devices. When handling electrostatic sensitive devices, use a static-dissipative mat and a static dissipative wrist strap.

4 Create ESD conditions.

5 Remove the control unit from the interlock of the device and place it on a static-dissipative mat.

6 Unscrew the screws of the plug-in connector (Fig. 1/1) on the back of the control unit, and disconnect the connecting cable from the control unit.

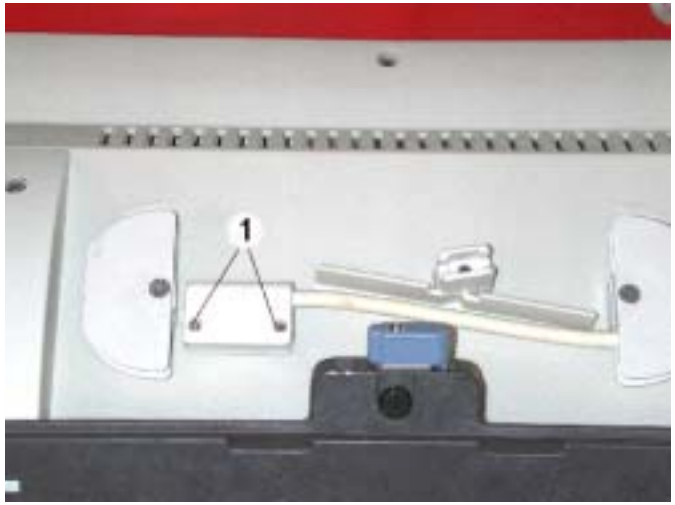

Fig. 1 Plug-in connector

7 Place the control unit on the static-dissipative mat.

8 Remove the screws (Fig. 2/1).

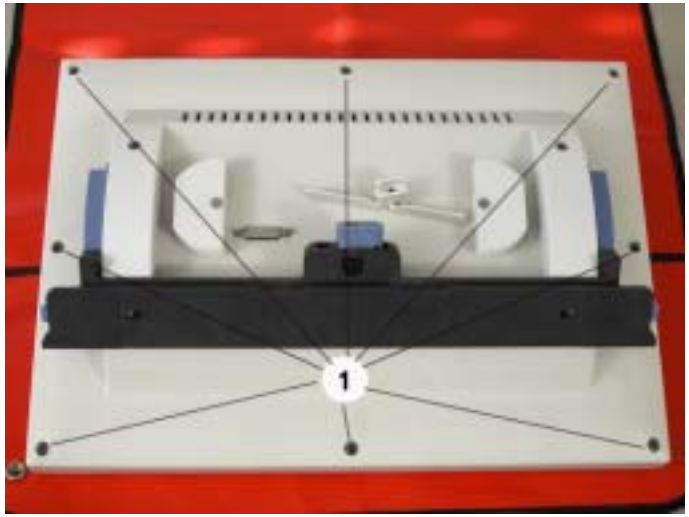

Fig. 2 Rear panel of the control unit

9 Remove the rear panel and put it aside.

10 Pull out the cable connector (Fig. 3/1).

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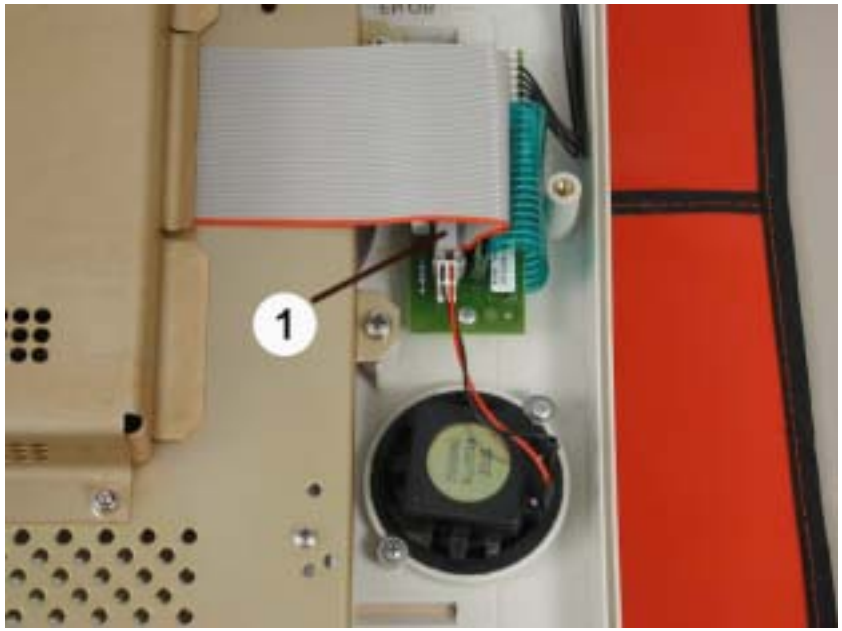

Fig. 3 Cable connector

11 Hold the flex cable near the connection socket and pull it out slowly and carefully (Fig. 4).

Fig. 4 Adapter PCB, flex cable

12 Remove the DSUB interlocking pin (Fig. 5/1).

Do not reuse DSUB interlocking pins that have been secured with Loctite! Dispose of DSUB interlocking pins that have been secured with Loctite according to applicable waste disposal regulations.

13 Dispose of DSUB interlocking pin (Fig. 5/1) according to applicable waste disposal regulations.

14 Remove the cap nuts (Fig. 5/2).

Do not reuse cap nuts (self-locking nuts)! Dispose of removed cap nuts according to applicable waste disposal regulations.

15 Dispose of cap nuts (Fig. 5/2) according to applicable waste disposal regulations.

16 Remove the washers (Fig. 5/2).

17 Remove the cover and put it aside.

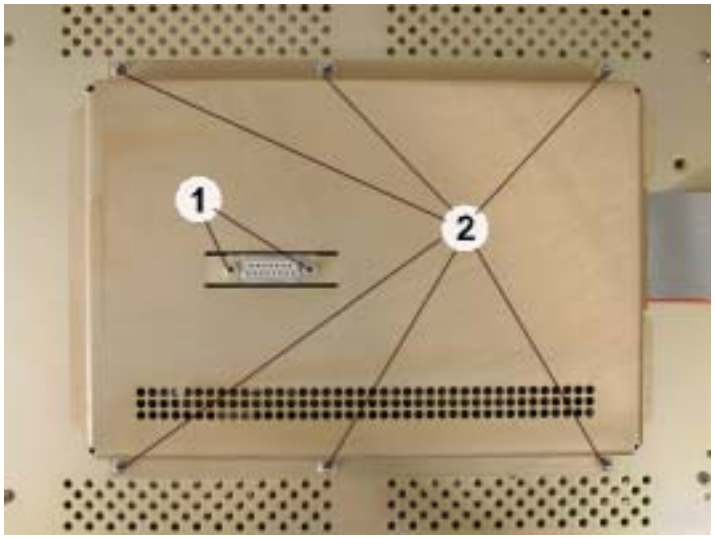

Fig. 5 Cover

18 Remove the cap nut (Fig. 6/1).

Do not reuse cap nuts (self-locking nuts)! Dispose of removed cap nuts according to applicable waste disposal regulations.

19 Dispose of cap nut (Fig. 6/1) according to applicable waste disposal regulations.

20 Remove the washer (Fig. 6/1).

21 Remove the cable clamp with ferrite core and washers from the stud.

22 Remove the connectors (Fig. 6/2) from the plug-in connectors

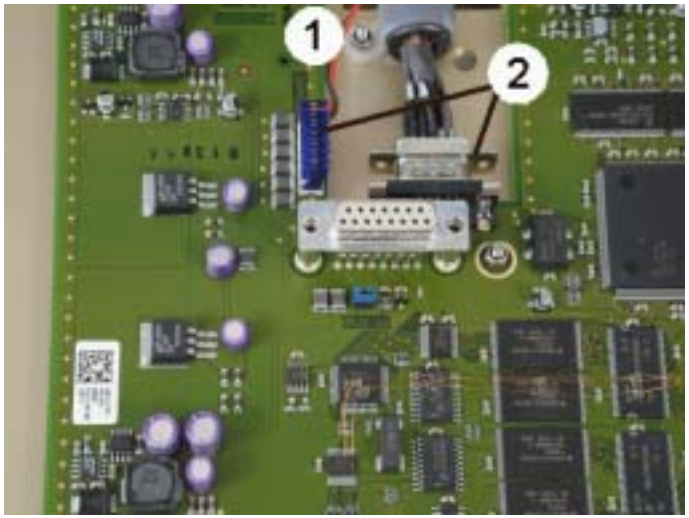

Fig. 6 Detail of the Graphics Controller 8 PCB

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23 Remove screws (Fig. 7/1).

24 Carefully remove the installation frame with display from the front frame **(Note: the touchscreen is only loosely mounted in the front frame with a sealing; if the sealing sticks to the display, the touchscreen could be unintentionally removed in the process and might fall down!)**.

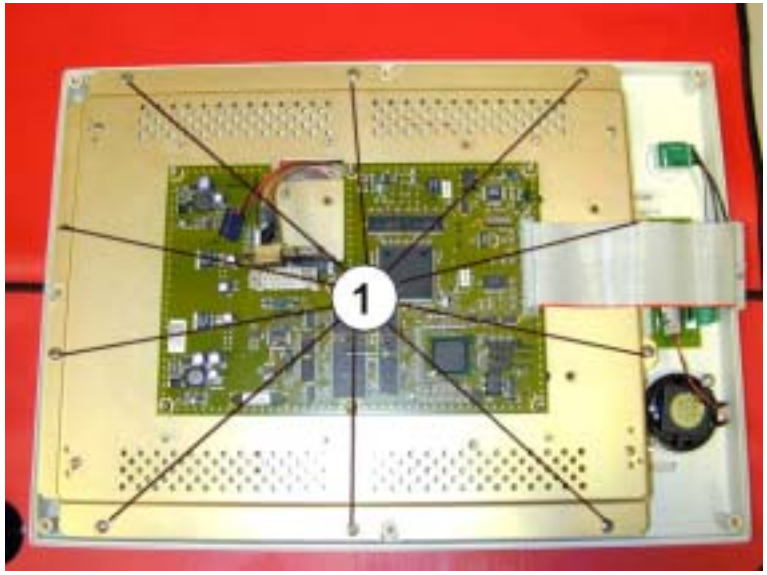

Fig. 7 Front frame; removing the installation frame

25 Turn the front frame around.

26 Remove the screw stop varnish (Fig. 8) from the screws.

27 Remove the screws (Fig. 8/1).

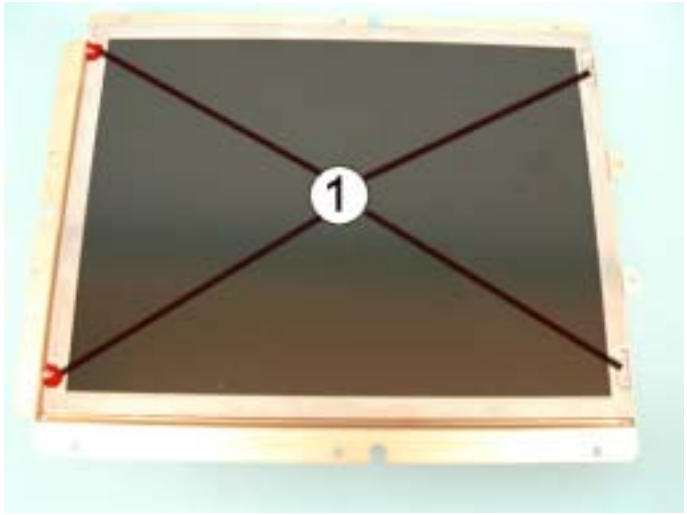

Fig. 8 Installation frame; removing the display

28 Turn the installation frame around.

29 Remove the screws (Fig. 9/1).

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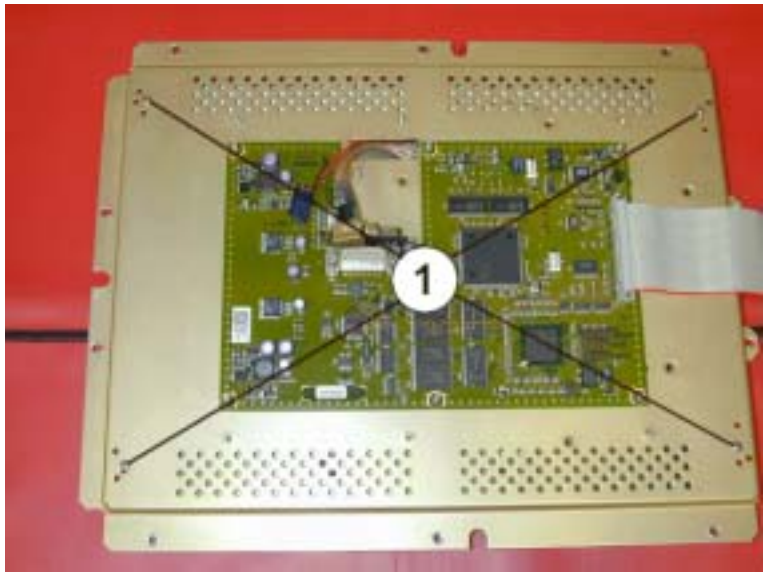

Fig. 9 Installation frame; removing the display

30 Thread the display cable through the opening in direction of the display and place the installation frame aside.

A faulty display is special waste. Dispose of a faulty display according to applicable waste disposal regulations.

31 Dispose of the faulty display according to applicable waste disposal regulations.

32 Dispose of old spacers, washers, and screws of the display according to applicable waste disposal regulations.

33 Install the new display on the installation frame as described in the supplied conversion instructions.

34 Secure the installation frame to the front frame using the screws (Fig. 10/1).

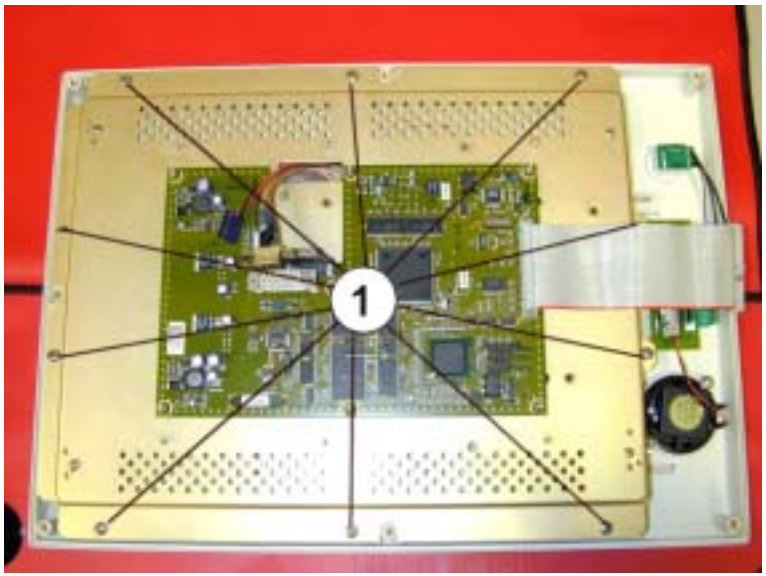

Fig. 10 Front frame; installing the installation frame

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35 Turn the front frame around and check whether the touchscreen lies flat in the front frame, correct the position of the installation frame **(Note: there should be no gap between touchscreen and front frame!)**.

36 Install the cable clamp with ferrite core around the data cable of the display.

37 Push both washers in between the cable clamp with ferrite core and slide the whole assembly over the stud (Fig. 11/1).

38 Slide the washer (Fig. 11/1) over the stud.

39 Plug both connectors (Fig. 11/2) into the sockets.

To allow for a secure attachment, you must use a new cap nut in the following work step!

40 Secure the cable clamp with ferrite core to the stud using a new cap nut (Fig. 11/1).

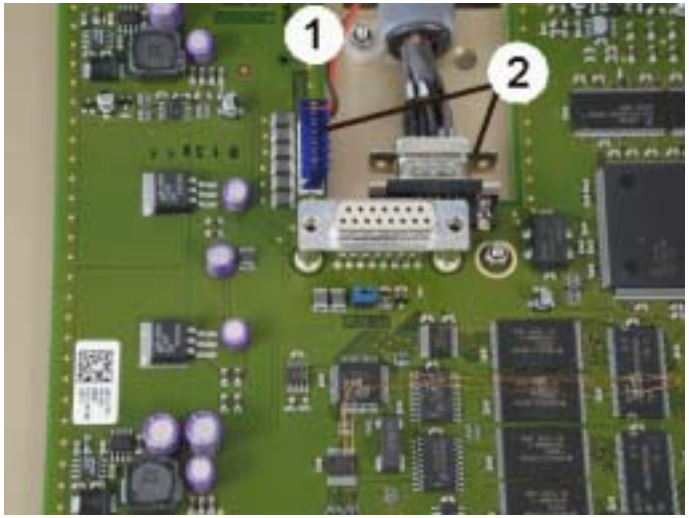

Fig. 11 Detail of the Graphics Controller 8 PCB

41 Place the cover onto the installation frame (Note: Pay attention to preferred direction!).

42 Slide the washers (Fig. 12/2) over the studs.

To allow for a secure attachment, you must use new cap nuts in the following work step!

43 Secure the cover using new cap nuts (Fig. 12/2).

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To allow for a secure attachment, you must use new DSUB interlocking pins in the following work step!

44 **Apply Loctite** onto the threads of the new DSUB interlocking pins (Fig. 12/1), then secure the cover to the connection socket using the DSUB interlocking pins.

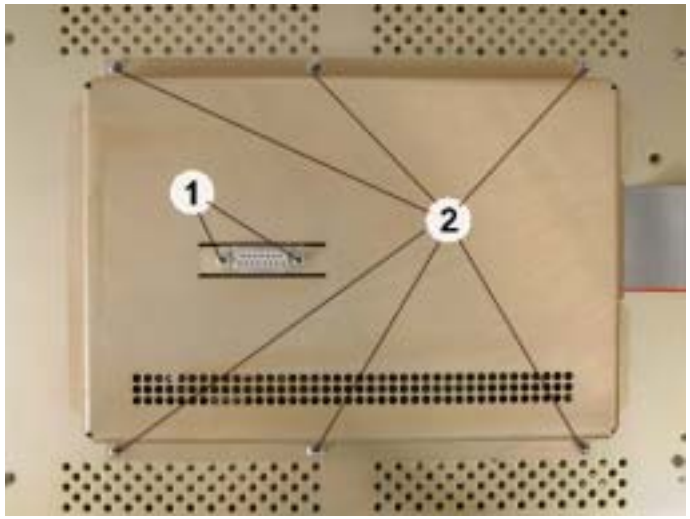

Fig. 12 Cover

45 Hold the flex cable near the connection socket and push it slowly and carefully into the connection socket (Fig. 13).

Fig. 13 Adapter PCB, flex cable

46 Plug the cable connector (Fig. 14/1) into the connection socket.

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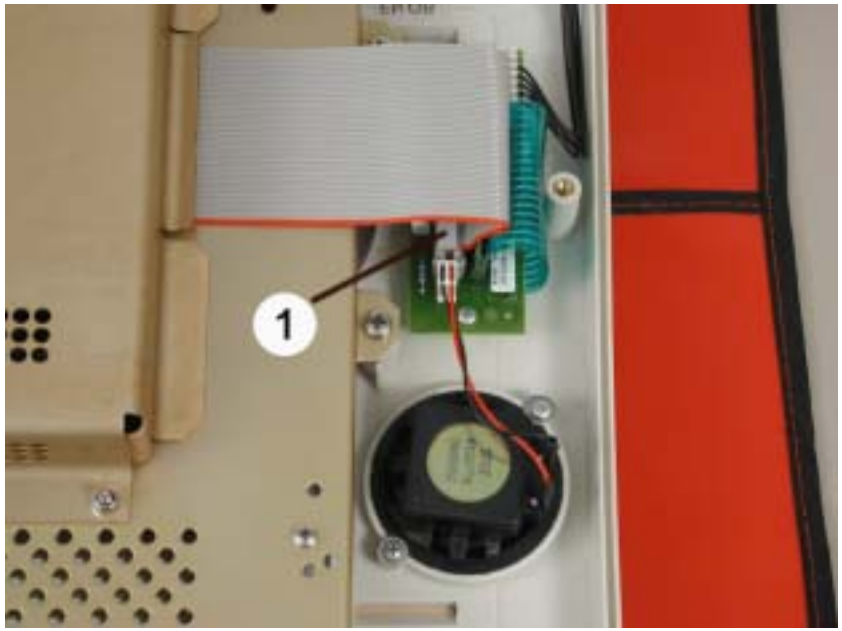

Fig. 14 Cable connector

47 Place the rear panel onto the front frame and secure it with the screws (Fig. 15/1).

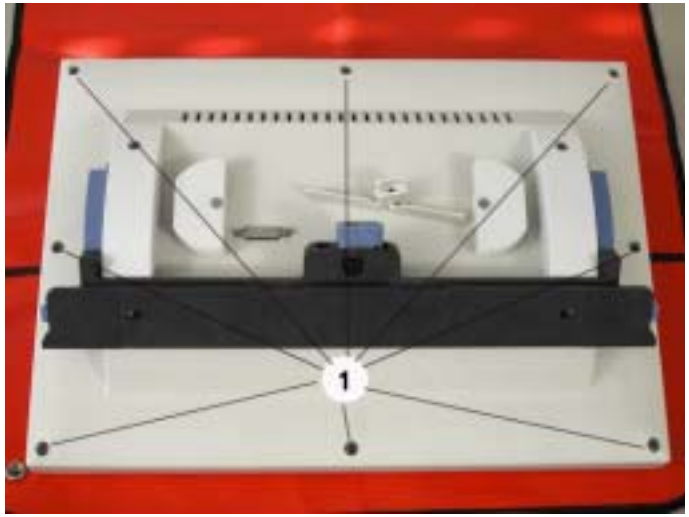

Fig. 15 Rear panel of the control unit

48 Plug the connection cable into the control unit, and secure the plug-in connector to the rear panel of the control unit using the screws (Fig. 16/1).

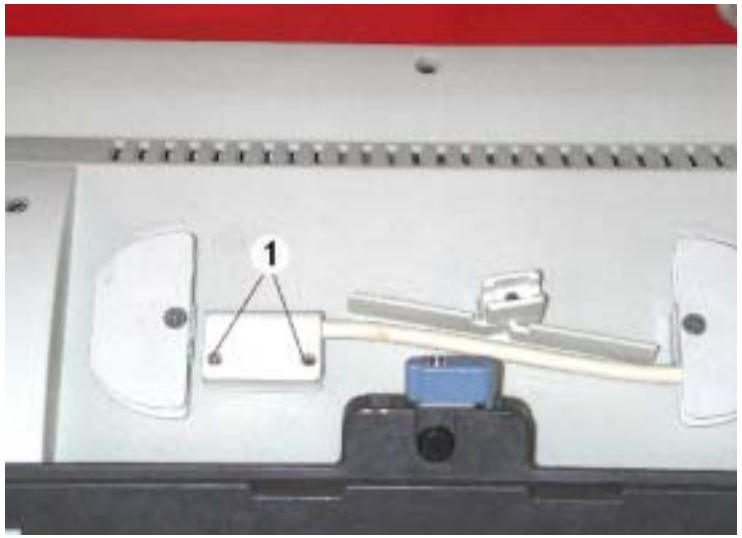

Fig. 16 Plug-in connector

49 Push the control unit into the interlock of the device.

50 Plug the power plug of the device into the socket-outlet.

51 Switch the device on.

52 Perform “electrical safety tests” and “function tests” as described in the PMS procedure. For the USA and Canada: test according to CAN/CSA-22.2 No. 601.1-M90.

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